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the constellations *Draco* and *Camelopardalus*. About $7^h 45^m$ there was visible in the comet-searcher a very faint nebula, which, when observed with the refractor, exhibited a diameter of several minutes, and by its proper motion was speedily recognised to be a comet. By four comparisons with one of Argelander's stars, M. Bruhns obtained the following position:—

	Berlin M.T. h m s	R.A. ° ′ ″	Decl. ° ′ ″
Sept. 12	9 34 48·5	118 38 28·6	+75 5 17·6

The daily motion is,

In R.A. about +5½° In Decl. about −30′

Elements of Comet IV. 1854. By M. Bruhns.

T	1854, Oct. 27·0722 Berlin M.T.	
	° ′ ″	
ϖ	93 21 21·2	Mean Equinox 1855·0
☊	324 43 15·6	
i	40 57 34·7	
Log q	9·906626	

Motion direct.

These elements are calculated from the following observations:—

	Berlin M.T. h m s	App. R.A. ° ′ ″	App. Decl. ° ′ ″
Sept. 12	9 34 48·5	118 50 28·6	+75 5 17·6
15	10 1 5·3	134 1 38·1	+72 57 40·9
18	8 43 18·9	145 5 39·6	70 5 12·0

The mean observation will be represented thus:—

		″
In Longitude,	Theo. — Obs.	+7·3
Latitude,	—	−3·8

Observations of Comet IV. 1854, *taken at Mr. Bishop's Observatory.*

1854.	Gr. M.T. h m s	R.A. h m s	Decl. ° ′ ″
Sept. 20	8 22 4	10 3 37·14	+67 49 50·9
21	7 50 25	13 18·51	66 41 6·8
24	12 42 44	10 38 59·71	+62 46 52·3

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Places of Comet II. of 1854, *as observed at Madras with the Lerebours Equatoreal.* By Captain W. S. Jacob.

1854.	Madras Sid. Time.				R.A.			N.P.D.			Star compared.	Power used.
	h	m	s		h	m	s	°	′	″		
April 5	8	14	0	(*a*)	2	42	39·0	74	28	0	Independent	113
6	8	7	20			54	22·8	75	27	0		80
7	7	55	0	(*b*)	3	5	13·8	76	27	6		113
8	8	4	0			15	33·20	77	27	41	B.A.C. 1087	113
10	7	55	31	(*c*)		34	6·35	79	28	7	1174	113
11	8	5	20			42	34·67	80	26	39·6	W. iii. 841	83
12	8	9	37			50	29·27	81	23	6·0	903 & 990	—
13	8	8	53			57	50·70	82	17	31·5	1087 & 1147	—
14	8	22	30		4	4	49·65	83	10	27·0	W. iv. 41	—
15	8	20	50	(*d*)		11	19·02	84	0	40·0	170	—
18	8	45	22			28	44·78	86	19	50·0	608	—
19	8	44	55		4	33	53·74	87	1	44·0	695	—

Assumed Apparent Places of Comparison Stars.

Star.	R.A.			N.P.D.		
	h	m	s	°	′	″
B.A.C. 1087	3	22	47·80	77	33	58·0
1174		40	14·80	79	18	37·9
W. iii. 841		43	21·94	80	23	24·5
903		46	49·70	81	15	19·0
990		50	51·25	81	23	44·0
1087		56	0·90	82	12	38·0
1147	3	59	0·60	82	12	23·0
W. iv. 41	4	3	12·80	83	5	47
170		9	14·24	84	1	6
608		28	16·90	86	14	6
695	4	31	53·90	87	4	24

“ (*a*) Nucleus bright, in form of a crescent; light = a star 5th mag.; outline of envelope a fine parabola; extremity undefined. From the low altitude and hazy sky on this and the two following days, no star could be found for comparison, and the places are uncertain to about 30″.

“ (*b*) Nucleus only, seen through clouds.

“ (*c*) Sky clear; bright moonlight; envelope barely visible, nearly 1° long; nucleus more concentrated, reddish, with ill-defined *horns* towards W.

“ (*d*) Wind so violent and gusty that the chronometer-beats could not be heard. Observations otherwise good; instrument being perfectly steady.”

On the Difference of Longitude between the Observatories of Brussels and Greenwich, as determined by Galvanic Signals.

By G. B. Airy, Esq., Astronomer Royal.

This Memoir is divided into six Sections.

Section I. *History and General Arrangements.*

“ The increasing importance of galvanic communication in the

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